

REMARKS

By this amendment, Applicants have amended claims 1-2, 4, 6-10, 12, 14-15, and 19, canceled claims 5, 18, and 23-24, without prejudice, and added claims 25-28. As a result, claims 1-4, 6-12, 14-16, 19-22, and 25-28 are pending in this application. These amendments are being made to facilitate early allowance of the presently claimed subject matter. Applicants do not acquiesce in the correctness of the objections and rejections and reserve the right to pursue the full scope of the subject matter of the original claims, or claims that are potentially broader in scope, in the current and/or a related patent application. Reconsideration in view of the following remarks is respectfully requested.

In the Final Office Action, the Office Action Summary incorrectly indicates claims 13 and 17 as being withdrawn from consideration. Applicants note that these claims were previously canceled, without prejudice.

Further, the Office objects to the IDS because it does not indicate what is to be considered with respect to the two non-English language foreign Patent Documents. By this response, Applicants respectfully request that the Office consider the English language abstracts provided therewith.

Further, the Office rejects claims 1-12, 14-16, and 18-24 under 35 U.S.C. § 102(e) as allegedly being anticipated by U.S. Patent No. 6,799,181 (Vishnubhotla). Applicants respectfully traverse these rejections.

Claim 1

With respect to claim 1, the Office again fails, *inter alia*, to show the claimed automatically selecting a set of algorithms based on objectives for a data mining model. In

support of the rejection, the Office cites Vishnubhotla, col. 4, lines 13-15, and states “wherein selects data minding [sic] algorithms useful for solving the identified problems”. Final Office Action, p. 4. However, Applicants again note that the entire sentence cited by the Office reads “**[t]he analytic application developer** then selects data mining algorithms useful for solving the identified problems and defines data schema useful as inputs to the selected mining algorithms.” Vishnubhotla, col. 4, lines 12-15. As clearly stated by the sentence cited by the Office, the selection of data mining algorithms is not performed automatically. Rather, the selection is manually performed by an analytic application developer. In sharp contrast, the claimed invention provides a computerized method of generating a data mining model in which a set of algorithms is automatically selected based on objectives for the data mining model.

The Examiner fails to address this deficiency of the rejection in the Final Office Action. In particular, on pp. 14-15 of the Final Office Action, the Examiner quotes Applicants’ arguments. However, the Examiner then quotes Applicants’ next argument and does not address this argument. Should the Office maintain the rejection, Applicants respectfully request that the Office clarify how an analytic application developer manually selecting data mining algorithms allegedly discloses automatically selecting as in claim 1.

Regardless, by this response, Applicants have included subject matter that is similar to previously presented claim 5. To this extent, the Office fails, *inter alia*, to show that Vishnubhotla discloses automatically selecting a set of algorithms based on the objectives, which includes selecting a rule from a best practices database based on an objective for the data mining model and determining at least one of: an algorithm or a tuning parameter for an algorithm using the rule as in claim 1. In support of the rejection of claim 5, the Office cites Vishnubhotla, col.

14, lines 28-31 and col. 21, lines 24-28. Final Office Action, p. 6. The Office states that “radical [sic] basis function algorithm weighs sum of values producing the best predictions are determined by the algorithm at each filtering center”. *Id.* However, Applicants note that such functionality is unrelated to automatically selecting a set of algorithms based on objectives for a data mining model. In sharp contrast, “[t]he radial bias function algorithm is a data mining algorithm...” Vishnubhotla, col. 13, lines 46-47. Further, Applicants note that the cited portions of Vishnubhotla and Vishnubhotla in general, is silent with respect to selecting a rule from a best practices database based on an objective and determining at least one of: an algorithm or a tuning parameter for an algorithm using the rule. As a result, this portion of Vishnubhotla fails to disclosed the automatically selecting of claim 1.

With further respect to claim 1, the Office again fails, *inter alia*, to show the claimed creating a plurality of datasets from sample data. In support of the rejection, the Office cites col. 10, lines 13-17 of Vishnubhotla and states “wherein create data schema or record structures”. Final Office Action, p. 4. As best understood by Applicants, the Office apparently alleges that data schema or record structures are the same as the claimed plurality of datasets. However, Applicants note that as is well understood in the art, a data schema or record structure merely defines a structure for storing data. In sharp contrast, each of the claimed datasets includes a unique subset of the sample data.

Additionally, while Vishnubhotla discusses the use of a subset of historical data, see, e.g., Vishnubhotla, col. 11, line 58-col. 12, line 12, it fails to disclose the claimed creating a plurality of datasets from sample data. Further, Applicants note that Vishnubhotla discusses populating the input data schema with historical or production data from col. 17, line 56-col. 20, line 36.

However, Applicants note that this includes filling a single table (MINING.SHOPPER) with data from another table (HIST.SHOPPER). As is known in the art, a “dataset” comprises a data file or a collection of interrelated data. See, e.g., “data set”, The Computer Language Company, available at www.techweb.com/encyclopedia/. To this extent, a plurality of datasets would require multiple data files or multiple collections of interrelated data. Vishnubhotla does not include any indication that either table is capable of storing multiple datasets, each of which includes a unique subset of data. Consequently, at most, this portion of Vishnubhotla discloses creating a single dataset (e.g., all the data in the single table MINING.SHOPPER). As a result, this portion of Vishnubhotla also fails to disclose creating a plurality of datasets as in claim 1.

In response to Applicants’ previous arguments, the Office cites col. 6, lines 60-61 and col. 1, lines 39-43 of Vishnubhotla. Final Office Action, p. 15. One of the cited portions discusses the creation of an analytic application by analytic application developers, while the other cited portion discusses the operation of the analytic application. The Office then alleges that these portions are “interpreted to be equivalent to ‘creating a plurality of datasets from sample data’.” *Id.* However, Applicants note that while col. 1, lines 39-43 discuss the analysis of samples of historical data, it does not disclose the creation of such samples. Similarly, while col. 6, lines 60-61 discusses the creation of an analytic application that analyzes the samples of historical data, it fails to disclose the creation of such samples. As a result, Applicants respectfully submit that the two additional portions of Vishnubhotla cited by the Office fail to provide any additional support for the Office’s interpretation of Vishnubhotla.

With further respect to claim 1, the Office again fails, *inter alia*, to show the claimed optimizing the set of algorithms using the plurality of datasets. In support of the rejection, the

Office cites Fig. 3 and col. 14, lines 61-63 of Vishnubhotla and states “wherein the input data parameters include input data, i.e. diagram 306 and optimize mining [sic] run for, i.e. diagram 308”. Final Office Action, p. 4. As best understood by Applicants, the Office apparently alleges that a data mining model definition that includes both “input data” and “optimize mining run for” parameters discloses the claimed optimizing the set of algorithms using the plurality of datasets. However, Applicants note that Vishnubhotla fails to disclose the use of a plurality of datasets in performing any sort of optimization. Rather, the “input data” parameter merely “indicat[es] the data file from which historical data is to be read for training the model.” Vishnubhotla, col. 14, lines 63-66.

In response to Applicants’ previous arguments, the Office cites col. 14, line 60-col. 15, line 10 of Vishnubhotla, and states “wherein optimization is interpreted to improve the speed of a program or to reduce the use of a storage during processing, and wherein data mining is interpreted to be the process of analyzing data to identify patterns or relationships, which is interpreted to be equivalent to “data sets”...” Final Office Action, pp. 16-17. In this case, the Office apparently uses a different meaning for “data sets” than used previously in the rejection. In particular, the Office apparently alleges that analyzing data to identify patterns or relationships is the same as a plurality of datasets. In contrast, the Office apparently previously stated that creating “a data schema or record structures” allegedly disclosed creating a plurality of datasets. Applicants respectfully submit that using different, inconsistent definitions in rejecting the same claim term is inappropriate. To this extent, should the Office maintain the rejection, Applicants respectfully request that the Office clarify the definition that it is using for the claim term “dataset”.

In light of each of the above-stated reasons, either alone or in combination, Applicants respectfully request withdrawal of the rejection of claim 1 and claims 2-4 and 6-11, which depend therefrom, as allegedly being disclosed by Vishnubhotla.

Claim 2

With further respect to claim 2, the Office fails to show that Vishnubhotla discloses any of the claimed processes. To this extent, Applicants have amended claim 2 to clarify that shuffling includes changing an order of entries in the sample data in a random fashion and that each partition includes a unique subset of the shuffled sample data. Applicants submit that Vishnubhotla includes no similar teaching or suggestion. As a result, Applicants again respectfully request withdrawal of the rejection of claim 2 and claims 3-4, which depend therefrom, as allegedly being anticipated by Vishnubhotla.

Claim 4

With further respect to claim 4, Applicants have amended the claim to expressly state that the creating is repeated to create multiple permutations of the plurality of datasets, and that each partition is included in the training dataset for at least one permutation. Applicants submit that Vishnubhotla includes no similar teaching or suggestion. As a result, Applicants again respectfully request withdrawal of the rejection of claim 4 as allegedly being anticipated by Vishnubhotla.

Claim 12

With respect to claim 12, Applicants have amended the claim to expressly state that automatically generating a plurality of datasets from sample data includes changing an order of entries in the sample data in a random fashion, placing each of the entries into one of a plurality

of partitions, and creating the plurality of datasets based on the plurality of partitions, each dataset including at least one of the plurality of partitions. Applicants submit that Vishnubhotla includes no similar teaching or suggestion. As a result, Applicants respectfully request withdrawal of the rejection of claim 12 and claim 14, which depends therefrom, as allegedly being anticipated by Vishnubhotla.

Claims 15 and 19

Initially, Applicants again note that the Office's rejection cites "Vishnubhotla in view of Campos". Final Office Action, p. 10. However, the rejection appears to allege that the claimed invention is anticipated by Vishnubhotla under 35 U.S.C. § 102(e). As a result, Applicants' response is filed based on this assumption. Applicants respectfully request clarification by the Office if this is not the case.

Regardless, Applicants have amended claims 15 and 19 to include similar features as included in claim 1. To this extent, Applicants incorporate the various arguments presented above with respect to claim 1. In light of these arguments, Applicants respectfully request withdrawal of the rejections of claim 15 and claim 16, which depends therefrom, and claim 19 and claims 20-22, which depend therefrom, as allegedly being anticipated by Vishnubhotla.

Conclusion

Applicants submit that each of the pending claims is patentable for one or more additional unique features. To this extent, Applicants do not acquiesce to the Office's interpretation of the claimed subject matter or the references used in rejecting the claimed subject matter. These features have not been separately addressed herein for brevity. However, Applicants reserve the right to present such arguments in a later response should one be

necessary and/or in a related patent application, either of which may seek to obtain protection for claims of a potentially broader scope.

In light of the above, Applicants respectfully submit that all claims are in condition for allowance. Should the Examiner require anything further to place the application in better condition for allowance, the Examiner is invited to contact Applicants' undersigned representative at the number listed below.

Respectfully submitted,

/John LaBatt/

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